REMARKS

Claims 1-6, 8-13 and 15-20 are pending in the application. Claims 1, 5, 8, 12, 15 and 19 have been amended.

Applicant believes that this amendment addresses the Examiner's rejection and that any changes do not introduce new matter into the specification, limit the scope of the claims or result in any prosecution history estoppel.

Previous Claim Rejections – 35 USC S. 102 and S.103

The Examiner stated that the rejections of claims 1-4, 8-11 and 15-18 remain in effect from the previous Office Action. In particular, the Examiner previously rejected claims 1-4 under 35 U.S.C. 102(b) as being anticipated by Dachiku et al, claims 8-11 under 35 U.S.C. 103(a) as being unpatentable over Dachiku in view of Kang and claims 15-21 as being unpatentable over Dachiku in view of Kang and further in view of Szeliski.

Applicant respectfully traverses the Examiner's rejection. In particular, all of the references, either alone or in combination, fail to teach or suggest "selecting a limited number of feature points from an image of the face where minimal or no local motion is observed to be video coded" as claimed or similarly claimed.

As noted in the specification on page 8, first and second paragraph:

> FIG. 1 illustrates, these triangular patches, in this particular embodiment in accordance with the invention, are divided into two classes, one class in which local motion is more significant, such as, for example, the triangular patches covering eyes, eyebrows, or mouth, denoted here $\lrcorner$, and *one class in which global motion is more significant, denoted here by the $\lrcorner_g$.* FIG. 1 illustrates the two classes of triangles, the shaded of triangles belonging to $\lrcorner$ and unshaded triangles belonging to $\lrcorner_g$.

> In this embodiment, *a limited number of feature points are selected from an image of the head.* In this embodiment, enough feature points are selected from different triangular patches to obtain the desired amount of accuracy or robustness without being computationally burdensome. Furthermore, a weighting factor is assigned to each feature point, depending upon the class of triangular patch to which it belongs. The weighting factor assigned to a feature point selected from the ith triangular patch is given by the following relationship.

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$$W_{pi} = \begin{cases} W_g, & \text{for all } i \_\_g \\ W_l, & \text{for all } i \_\_l \end{cases}$$

where W_g is greater than W_l.
(Emphasis added.)

Also, as noted in the specification on page 9, first paragraph:

The weighting factors are used in the Least Mean Square estimation of the global motion parameters in this particular embodiment, as described in more detail later, and there, the facial regions contributing more to the global motion have more weighting factors than the ones predominantly contributing to local motion; however, the invention is not restricted in scope to this embodiment. (Emphasis added.)

No where does Dachiku or the other references teach or suggest selecting a limited number of feature points from an image of the face where minimal or no local motion is observed to be video coded. The present invention provides for global motion estimation which is novel in the sense that instead of considering all the feature points, only a subset of the feature points which contribute to the global motion are considered. In particular, embodiments of the present invention choose most of the feature points in the object that either do not undergo local motion at all or where minimal local motion is observed. Additionally, there is also no motivation to combine these references.

Current Claim Rejections – 35 USC S. 102 and S.103

The Examiner rejected claims 5-6 under 35 U.S.C. 102(b) as being anticipated by Dachiku et al, claims 12-13 under 35 U.S.C. 103(a) as being unpatentable over Dachiku in view of Kang and claims 19-20 as being unpatentable over Dachiku in view of Kang and further in view of Szeliski.

Applicant respectfully traverses the Examiner's rejection for the same reasons noted above. Additionally, there is also no motivation to combine these references.

CONCLUSION

In view of the foregoing, it is respectfully asserted that all of the claims pending in this patent application are in condition for allowance.

The required fee for a three month extension of time is enclosed. No additional fees are required for additional claims. Should it be determined that an additional fee is due under 37 CFR §§1.16 or 1.17, or any excess fee has been received, please charge that fee or credit the amount of overcharge to deposit account #02-2666.

If the Examiner has any questions, he is invited to contact the undersigned at (310) 252-7605. Reconsideration of this patent application and early allowance of all the claims is respectfully requested.

Respectfully submitted,
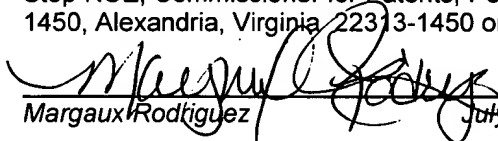
BLAKELY, SOKOLOFF, TAYLOR, & ZAFMAN LLP

Dated: July 15, 2004

By _____
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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, Post Office Box 1450, Alexandria, Virginia 22313-1450 on July 15, 2004.

_____
Margaux Rodriguez   July 15, 2004